March 12, 1957 R. BICKNELL 2,784,425

INFLATABLE LIFE RAFT AND SEA ANCHOR ASSEMBLY

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FIG. 1

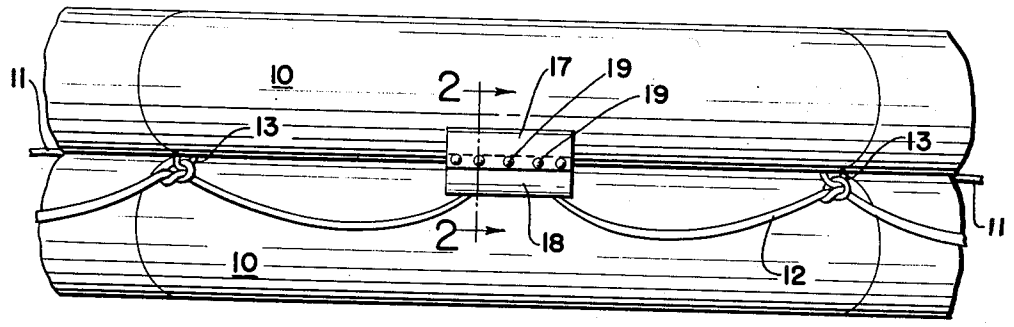
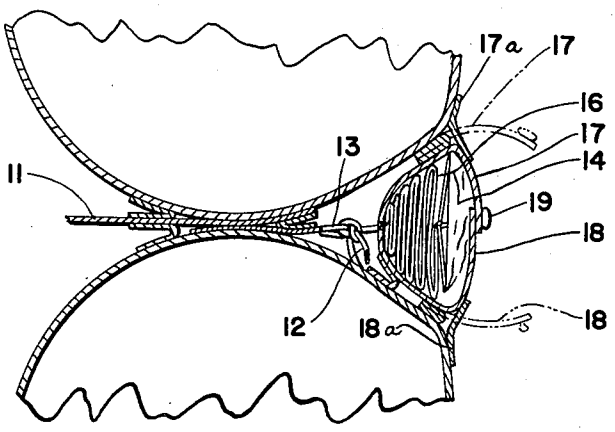


FIG. 2



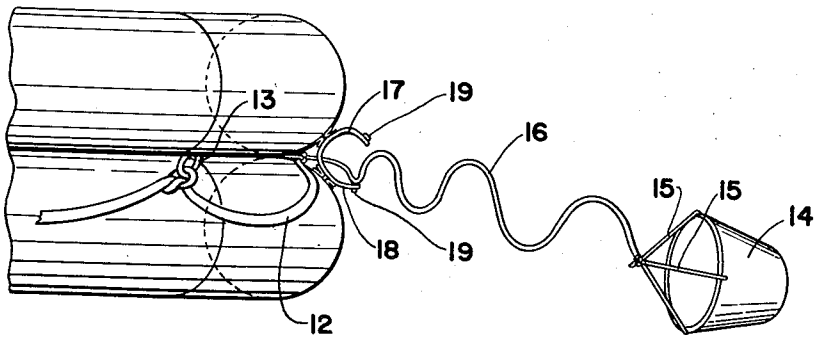


FIG. 3

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INFLATABLE LIFE RAFT AND SEA ANCHOR ASSEMBLY

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4 Claims. (Cl. 9—11)

This invention relates to the association of a sea-anchor and its line with a life raft and especially a life raft of the inflatable type.

Its chief objects are to provide an assembly in which the sea-anchor, permanently connected to the raft by its line, will be instantly and automatically cast, for functional relationship, upon the inflating of the raft; to provide for compact and non-obstructive stowage of the anchor and its line; to avoid entanglement of the line; and to provide these advantages in the case of a reversible raft, adapted to have the same structural characteristics and the same manner of operation with the raft either side up.

Of the accompanying drawings:

Fig. 1 is a fragmentary elevation of an inflated raft having the sea-anchor associated with it and in stowed condition.

Fig. 2 is a fragmentary section on line 2—2 of Fig. 1, with indication of the automatic anchor-casting operation.

Fig. 3 is a fragmentary elevation of the assembly as it appears after the anchor has been cast.

The raft, of the reversible type, comprises two endless, tubular, water-proof fabric buoyancy members **10**, **10** secured to each other and to the usual fabric floor **11** throughout an annular zone of contact and provided with the usual means, not shown, for inflating them. The usual life line **12**, festooned about the raft, is secured to it by the usual loops **13**, **13** having their anchorage in the outboard crotch between the buoyancy members.

The sea-anchor assembly comprises a bucket-shaped fabric anchor **14** having its rim connected by a plurality of circumferentially spaced cords **15**, **15** with an anchor-line **16** which has its other end permanently tied to one of the life-line loops **13**.

To provide a fabric wrapping for holding the anchor and its line in compactly folded condition in the crotch of the buoyancy members a pair of flaps **17**, **18**, permissibly being parts, as shown, of a single sheet of fabric, are seamed to the buoyancy members respectively at **17a** and **18a** and are provided at their outer margins with automatically-releasing fastening means such as the respective mating elements of a series of snap-fasteners **19**, **19**.

When the flaps **17**, **18** are parts of the same sheet of fabric, as here shown, the anchor line **16** preferably extends through a hole in the said sheet, between the bases of the flaps, at the position of the line's connection to one of the life-line loops **13**, so that tightening of the line will not put undue strain upon the fabric sheet.

In Fig. 2 the anchor line is shown as being looped in figure-eight fashion, with the loops in vertical or inclined positions, for clearness of illustration, although they preferably are horizontally disposed for compactness of

stowage between the buoyancy members when the latter are collapsed.

In the operation of the assembly inflation of the buoyancy members to about the condition of the stowage flaps **17**, **18** as shown in full lines in Fig. 2 automatically causes the elements of the snap-fasteners **19** to separate, thus freeing the flaps from each other as indicated by their dotted line positions in Fig. 2, and the sea-anchor **14** and its line **16** are thus automatically released for functioning. The flaps **17** and **18**, when they are parts of a single piece of fabric as above suggested, of course must be of such short length in relation to the opposite wall of the container of which they are a part (Fig. 2), and in relation to the positions **17a**, **18a**, at which they are seamed to the respective buoyancy members **10**, **10**, that the rounding of the buoyancy members by inflation will disengage the snap fasteners **19**, **19** by pulling the flaps away from each other.

In the appended claims, the portions of the walls of the buoyancy members **10** that are adjacent the flaps **17**, **18** are referred to as "flexible wall elements"; and the said flaps, their seam strips at **17a**, **18a**, and their snap-fasteners **19** are referred to as a "holding device."

Various modifications are possible without departure from the scope of the invention as defined in the appended claims.

I claim:

1. In combination with an inflatable life raft comprising two flexible wall elements that are moved away from each other by inflation of the raft, a sea anchor assembly comprising a sea anchor and a flexible anchor line permanently connecting the sea anchor to the raft, and a holding device releasably securing said line in folded relation, and also said sea anchor, adjacent at least one of said walls, said holding device comprising a flexible sheet element, means securing said element to one of said walls and releasable fastening means on said sheet element, said holding device also including additional releasable fastening means engaging said first mentioned fastening means and means securing said second mentioned fastening means to said other inflatable wall in a position spaced from the position of securement of said sheet element to said first mentioned wall, whereby tension of said holding device, due to inflation of said walls, releases said fastening device and sea anchor.

2. The combination as recited in claim 1 in which the raft comprises two generally round inflatable buoyancy members defining a crotch between them and wherein said walls are disposed on opposed sides of said crotch so that rounding of said members during inflation widens the crotch, thereby expressing said sea anchor.

3. A combination as defined in claim 2 in which the crotch, for the holding of the sea-anchor and its line therein, is on the outboard side of the raft.

4. A combination as defined in claim 1 in which the holding device is on the outboard side of the raft.

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